CLAIMS

1 – vertebral osteosynthesis equipment comprising bony anchoring members, such as pedicular screws (1), forceps or hooks, one or two linking rods (2), intended to be connected to these anchoring members, and connection assemblies (6, 3, 4, 10, 11 ; 40, 50, 4) of this or these rods (2) to these anchoring members, at least one of these anchoring members (1) being of the "polyaxial" type, i.e. including a connection assembly (6, 3, 4, 10, 11 ; 40, 50, 4) articulated with respect to a base portion (5) intended to be attached to the vertebra ;

Equipment characterized in that said "polyaxial" anchoring element (1) comprises a junction portion (7, 40) connecting a portion (6, 50) of said connection assembly (6, 3, 4, 10, 11 ; 40, 50, 4) and said base portion (5), this junction portion having a flexible structure providing the desirable joint of this connection assembly (6, 3, 4, 10, 11 ; 40, 50, 4) with respect to the base portion (5).

2 – Equipment according to claim 1, characterized in that the junction portion is formed by a part (7) distinct from the part (6, 50) of said connection assembly (6, 3, 4, 10, 11 ; 40, 50, 4) and of the base portion (5).

3 – Equipment according to claim 2, characterized in that the junction portion may then notably be composed of a rod (7) of flexible material.

4 – Equipment according to claim 1, characterized in that the junction portion is composed of an extension (40) of the base portion (5) or of said part (50) of the connection assembly, made flexible by an appropriate shape and/or by slots (41) or recesses (45).

5 – Equipment according to claim 4, characterized in that the extension (40) may for instance have a tubular structure and exhibit a helicoid slot (41), or may exhibit stepped radial recesses (45), preferably offset angularly.

6 – Equipment according to any claims 1 to 5, characterized in that the junction portion and the links of said part of said connection assembly and of

said base portion may be designed so that said part of said connection assembly and said base portion are never in contact with one another.

7 – Equipment according to any claims 1 to 5, characterized in that the junction portion (7) is slightly stretchable longitudinally and means (6, 9, 3, 4, 10, 11) are provided to stretch this junction portion (7) slightly longitudinally, enabling to space the surfaces away from one another whereas said part (6) of said connection assembly and the said base portion (5) contact one another.

8 – Equipment according to any claims 1 to 7, characterized in that surfaces by which said part (6) of said connection assembly and the said base portion (5) contact one another, may be shaped to guide the movement of joint of this connection part (6) with respect to the base portion (5).

9 – Equipment according to claim 8, characterized in that said surfaces of the part (6) of said connection assembly and of the base portion (5) may be bordered by lateral bearing surfaces, enabling lateral wedging of said part (6) with respect to the base portion (5).

10 – Equipment according to any claims 1 to 9, characterized in that said anchoring element (1) of "polyaxial" type comprises at least one part or a portion of part (10) with elastically deformable structure, placed after assembly, between a part (11) of the connection assembly and said base portion (5), this part or portion of part (10) with elastically deformable structure enabling mobility of the connection assembly, and hence of the linking rod (2), with respect to the base portion (5), with a dampening effect.